

## Perfect Competition

- large no. of firms producing and selling
- all products are homogeneous
- both buyers and sellers have perfect info
- Entry and exit from industry is free
- Price elasticity is  $\infty$
- Pure competition is almost similar

Short Run Equilibrium

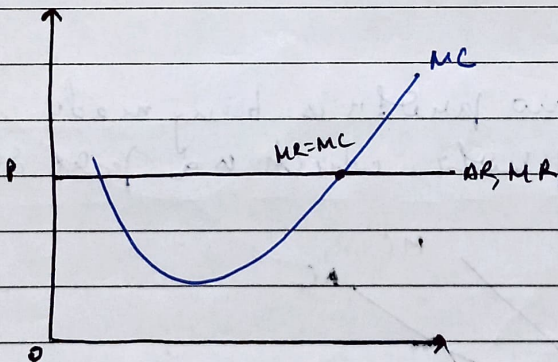
Long Run Equilibrium

Normal Profit

Supernormal Profit

Loss

### Short Run

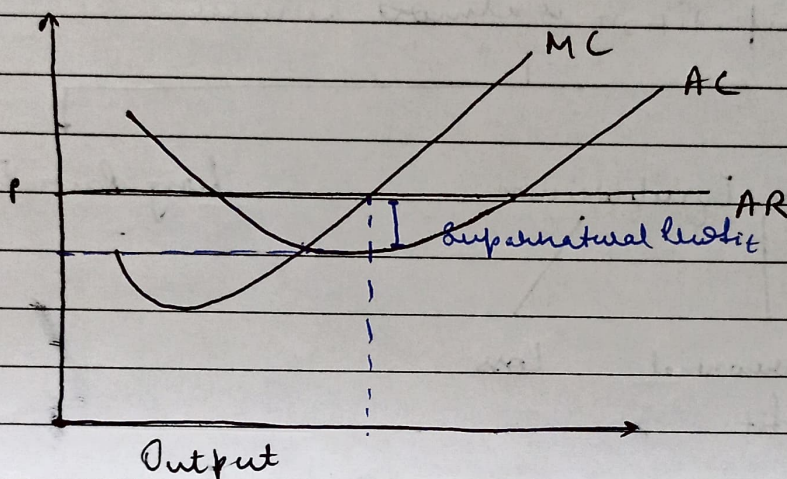


MC = MR at pt. where MC cut AR, MR from below  
 $AR = P$ , AR is demand curve  
MC cut AC and AVC at their minimum pt.

## Supernormal Profit

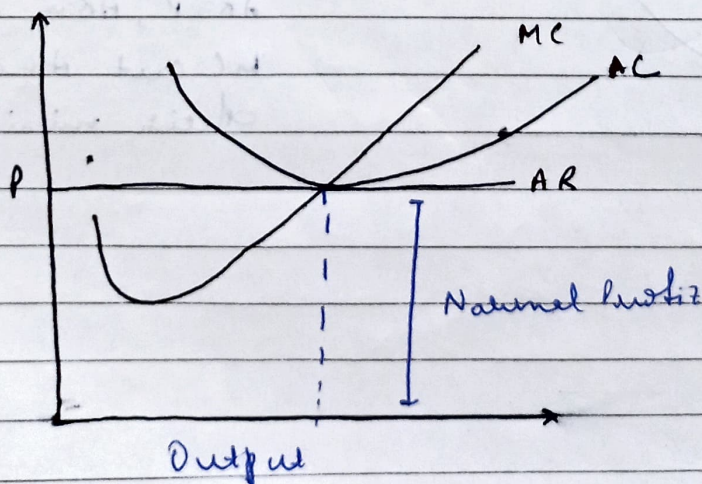
AR contains normal profit which is cost of entrepreneurship.

$AR > AC$  and their difference is  $\uparrow$  supernormal profit



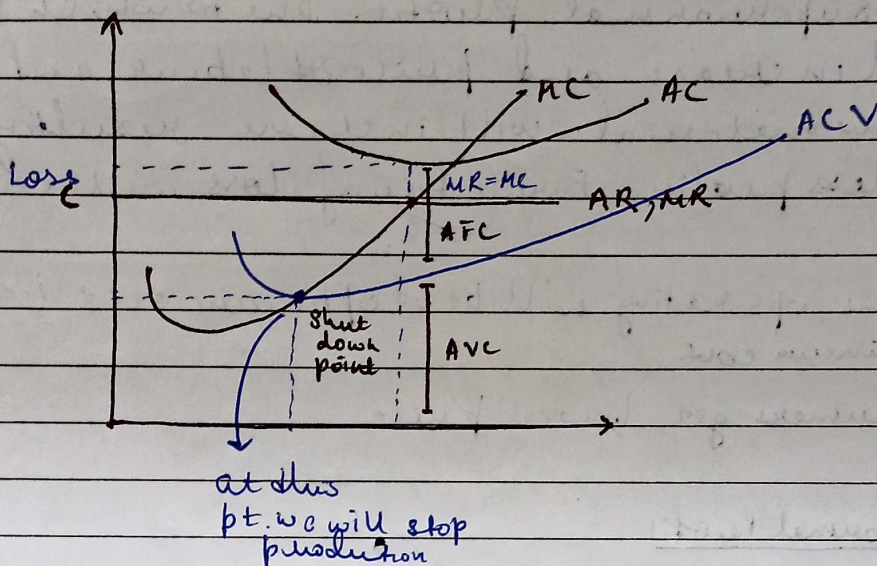
## Normal Profit

When  $AR = AC$  and no profit is being made except normal profit which is a part of AR

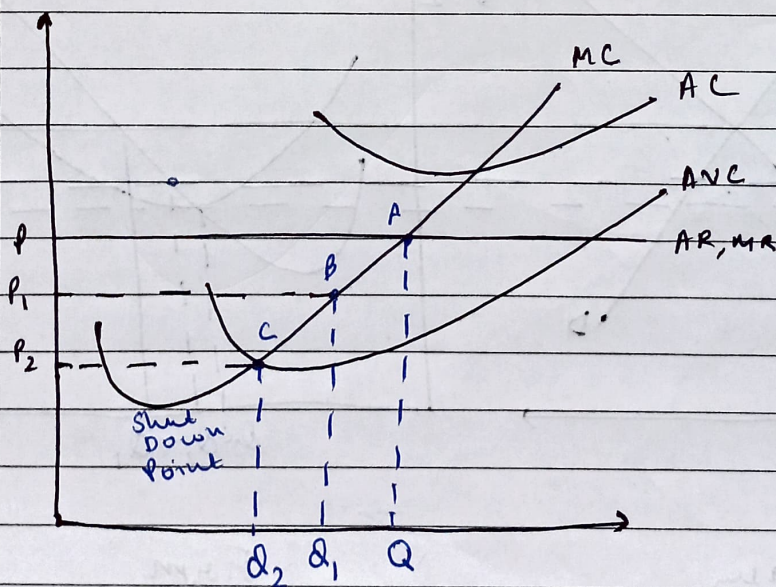


## Loss

$AR < AC$  but loss will not lead to closure of firm it will only happen when  $AR < AVC$  and won't be covering any AFC.



## Supply Curve



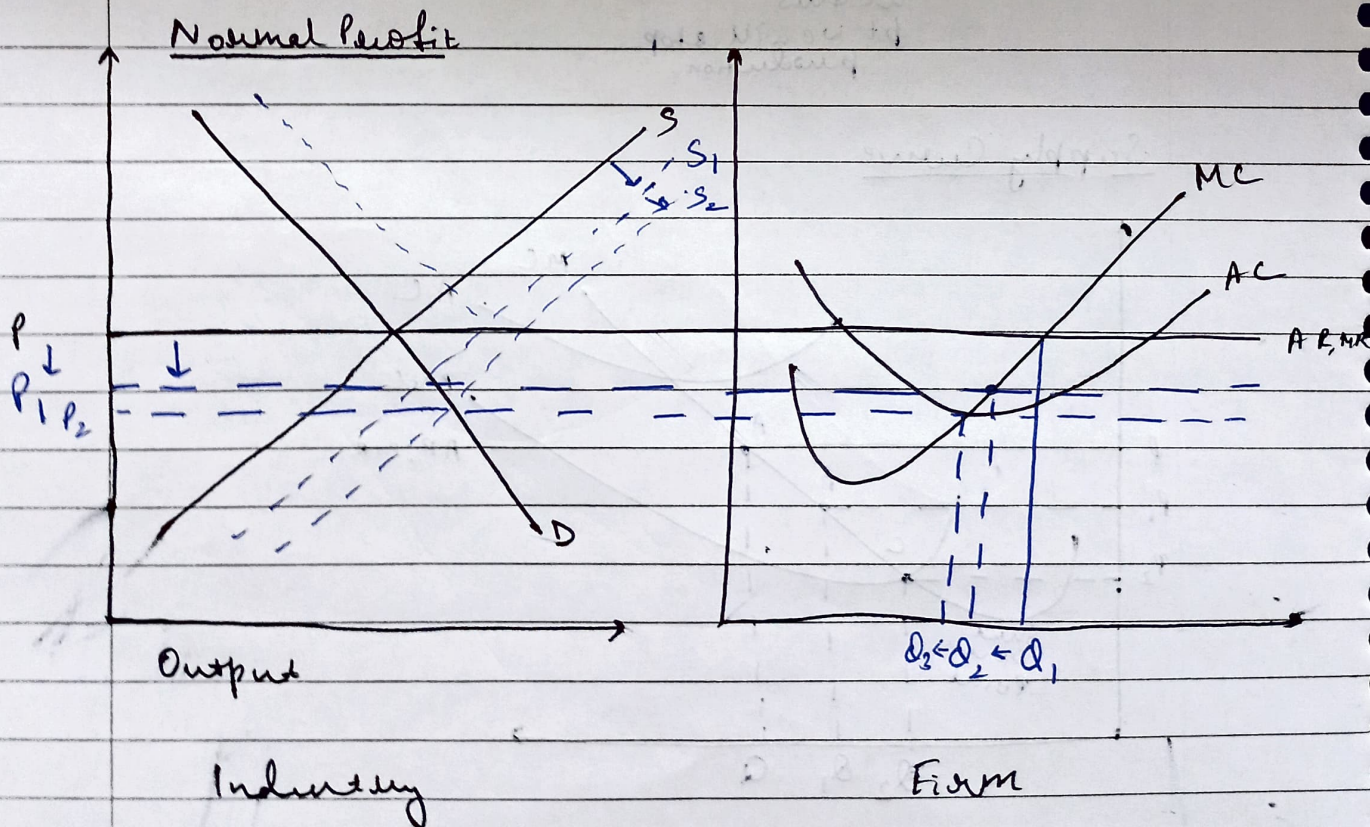
here output is dependendent on price which is independent and output will be generated till C.

## Long Run Equilibrium

In long run firms earn only normal profit as in short run, some firms won't enter due to losses but some will enter due to supernormal profit. Due to which supply will increase and price of labour and raw material will increase resulting in less profit. Firms facing loss will exit.

Firms operating will be of optimum size i.e., minimum cost

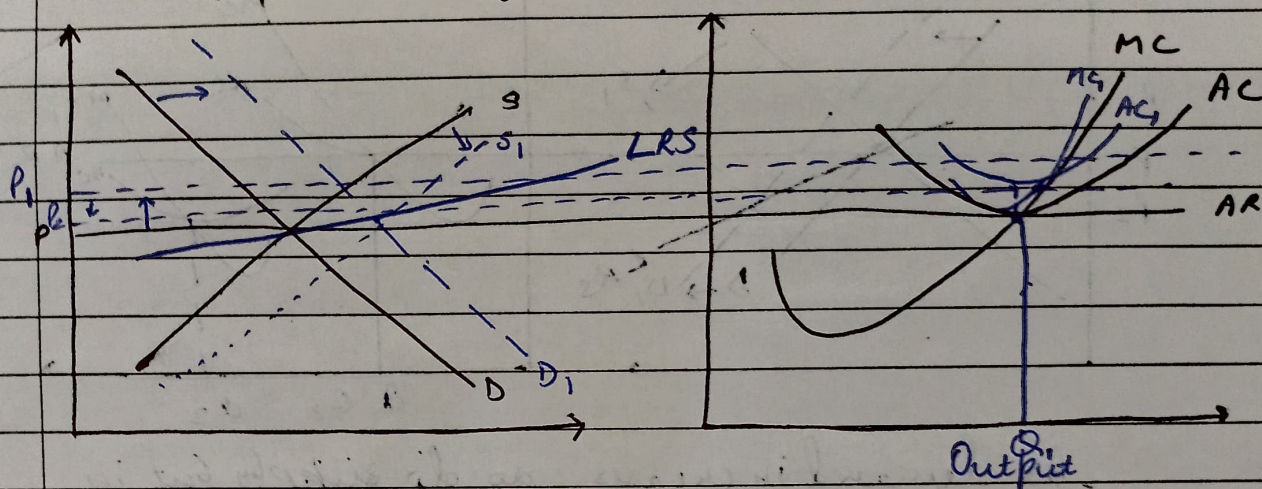
Consumers get lowest price



As more firms enter industry supply  $\uparrow$  but demand is same so price ~~increases~~ <sup>decreases</sup> resulting in decline in AR this will continue till  $AR = AC$  and only normal profit remains

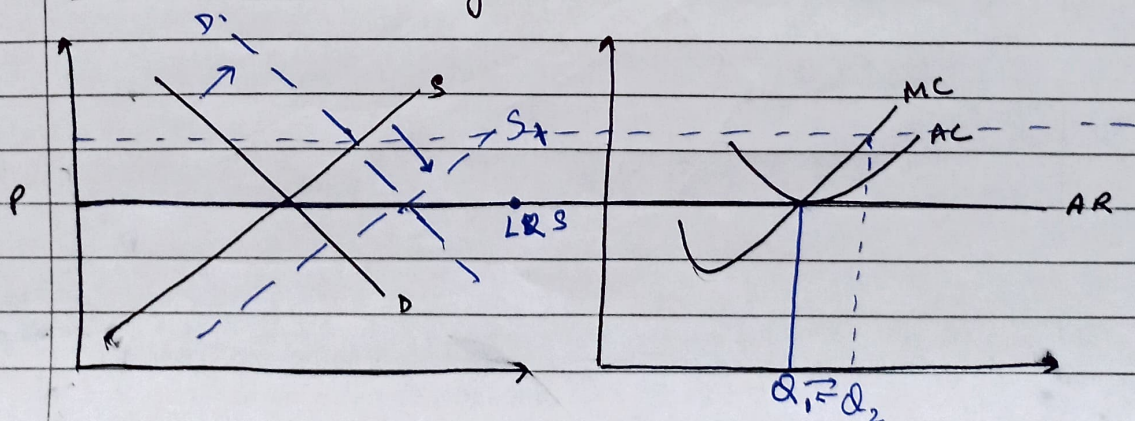
## Supply Curve

### Increasing Cost Industry



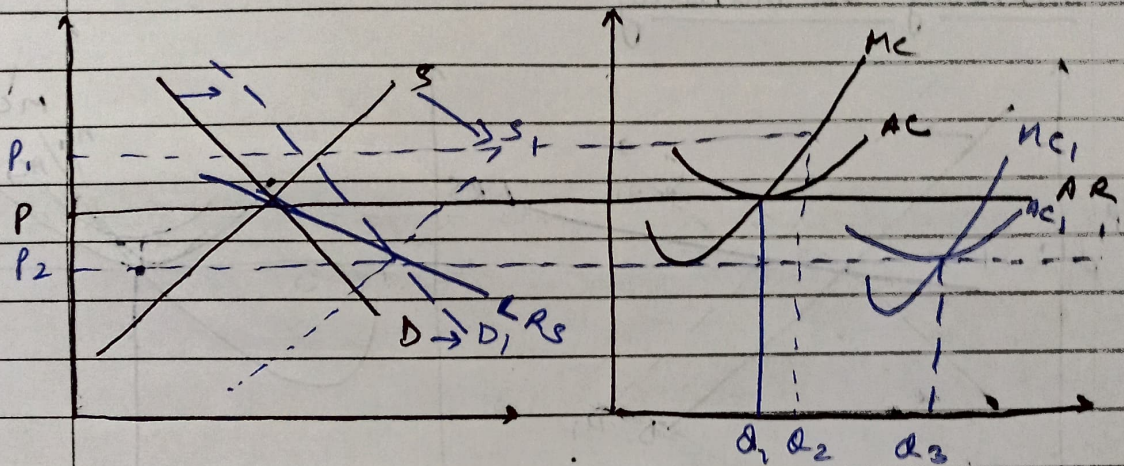
As demand increases, so does the prices resulting in supernatural profits for a short period but soon more firms will enter which will increase the supply now the new price will be b/w the previous two. As it is in increasing cost industry & cost will increase giving us new AC and MC joining intersection pt. of both the supply curve will give LRS (Long Run supply curve)

### Constant Cost Industry



As demand increase so will supernatural profit but this time ~~the~~ cost won't increase so when supply increase price goes back to its normal level

## Decreasing Cost Industry

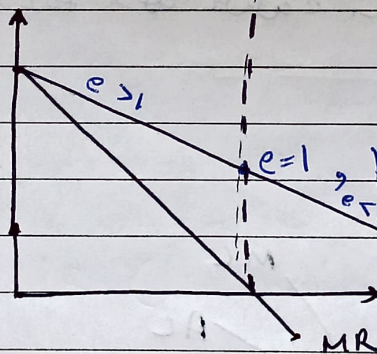
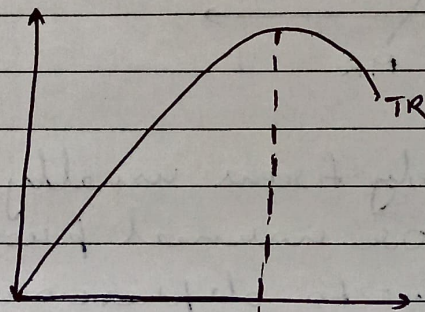


As demand increases so do supply but in this case cost further decreases due to which output will be increased and we will get new  $MC$  and  $AC$ .

## Monopoly

- There must be single producer or seller of product
- No close substitute of product available
- Strong barriers to the entry into industry

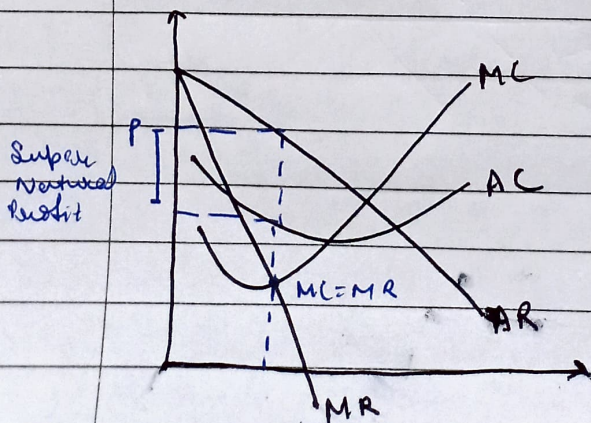
$AR > MR$ , when  $MR = 0$   $TR = \text{Max}$ ,  $AR = P$



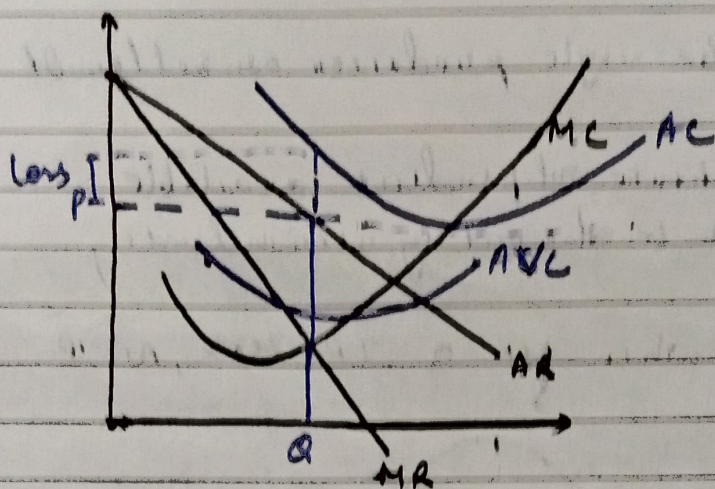
$e > 1$   
 $e = 1$   
 $e < 1$   
 producer will never operate beyond this pt. as  $TR$  starts declining

## Short Run

### Super Normal Profits

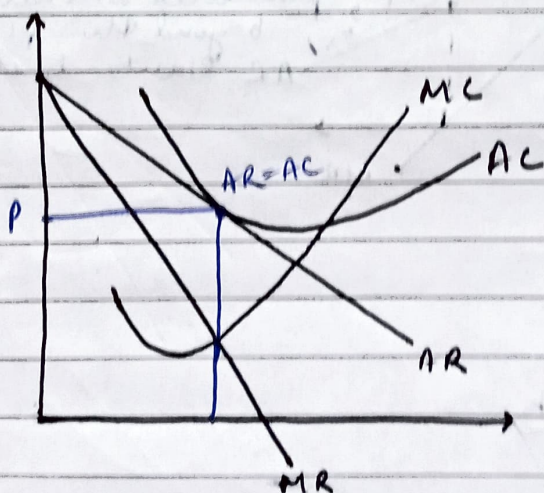


## Loss



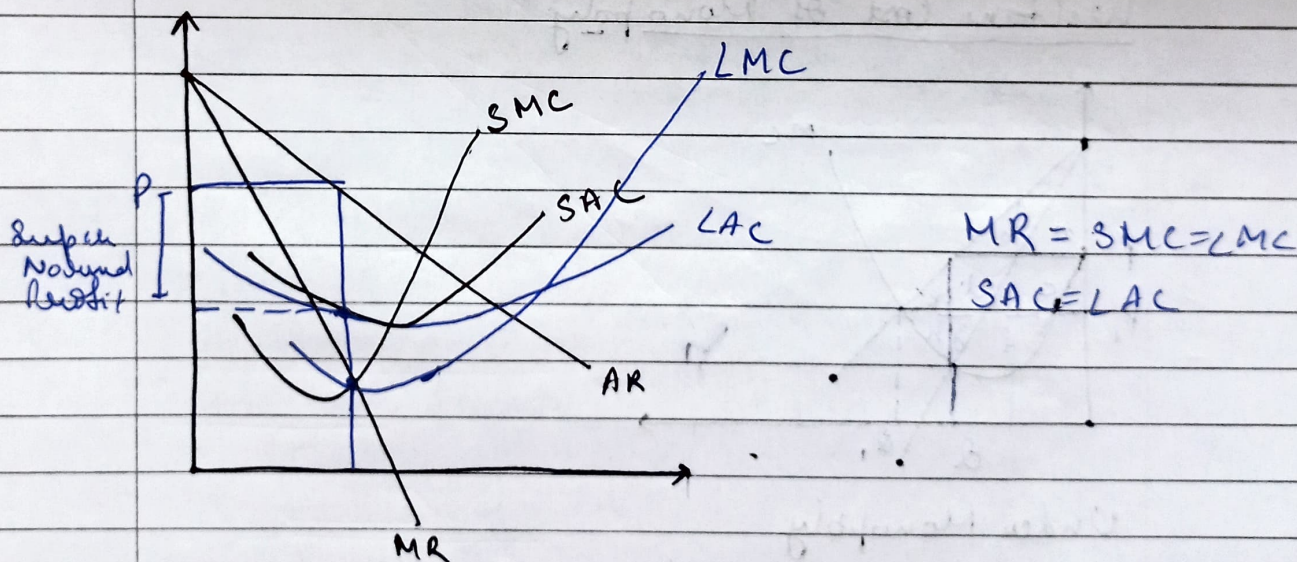
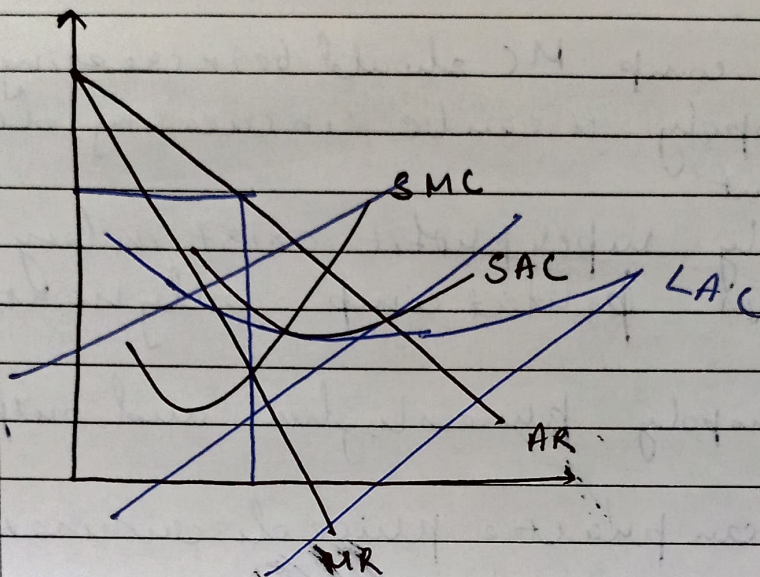
Although monopoly firms usually earn supernormal or normal profit but sometimes due to depression or decline in demand they can earn loss for short term.

## Normal Profit



## Long Run

In long run monopoly, firms earn only super normal profit.

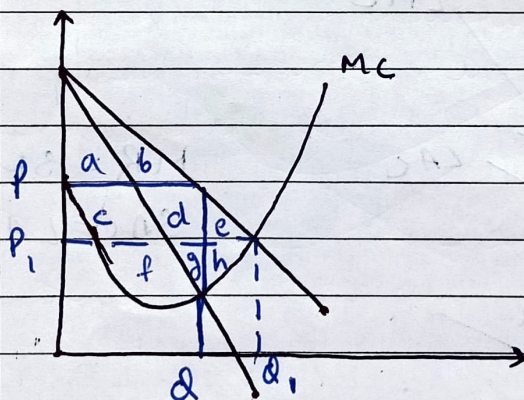


LMC will cut MR at same place SMC cut and LAC will be tangent to SAC on the output line

## Difference b/w Perfect Competition & Monopoly

- In perfect comp  $P = MR = AR = MC$ , in monopoly  $P > MR$  at equilibrium
- In perfect comp MC should be increasing but in Monopoly it can be increasing, decreasing or constant
- In monopoly super profit exists, in long run but in perfect comp only normal profit
- Under monopoly price is higher and output is lower
- Monopoly can practice price discrimination

## Welfare Cost of Monopoly



Under Monopoly

Consumer Surplus :  $a + b + c + d$

above  $P_1$

Producer Surplus :  $f + g$

under  $P_1$

Under Competition

CS :  $a + b + c + d + e$

PS :  $f + g + h$

\_/\_/\_

Total Surplus:  $a + b + c + d + e + f + g + h$

$$\text{Diff} = \text{Total Surplus under Comp} - \text{Monopoly} \\ = e + h$$

So, for monopoly to produce beyond  $Q$  they have to reduce the price

### Price Discrimination

A seller is indulging in price discrimination when he is charging different prices for different buyers for different varieties of same good and prices are not proportional to MC.

Personal (1<sup>st</sup> degree) Local (2<sup>nd</sup>)

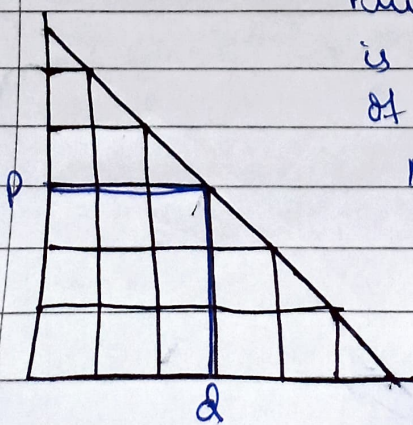
charge diff.  
price from  
diff. buyer

charge diff.  
price in  
foreign

According to use  
or trade (3<sup>rd</sup>)

charge diff. price  
as per use case  
such as electricity  
at industry & household

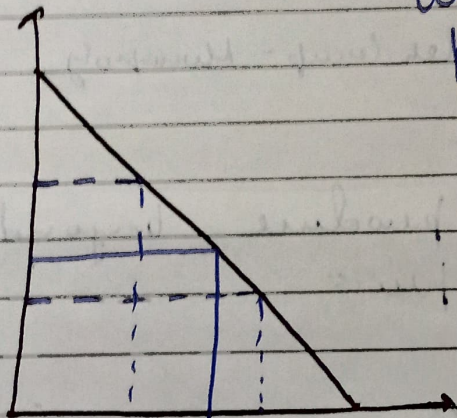
### 1<sup>st</sup> Degree



Price discrimination when monopoly is able to sell each separate unit of product at a different price  
Not possible in real world

Earn extra revenue by eliminating consumer surplus

## 2<sup>nd</sup> Degree



When firm charges diff. prices for same good based on the volume purchased

In this producer sell by forming bundle of a certain no. of products.

## 3<sup>rd</sup> Degree

It involves charging diff. prices to diff. group of consumers for same good. These groups can be identified by particular characteristics such as age, sex, location, time of use etc.

- Discount for students
- Book in Advance

## Monopolistic

- large number of sellers
- differentiated products i.e. close substitutes will be available.
- real market form
- More the diff. b/w AR and MR more will be the monopoly power.
- Real quality difference: raw material, design, packaging
- Imaginary Difference: Trade Mark, Brand

### Price Variation

How much output change due to change in price

### Product Variation

Different producers might change their product to create differentiation from competitors.

There exist non-price competition i.e. a competitor might change a product a little and charge it's quantity ~~at~~ for same price. Due to this there is no demand curve in monopolistic competition.

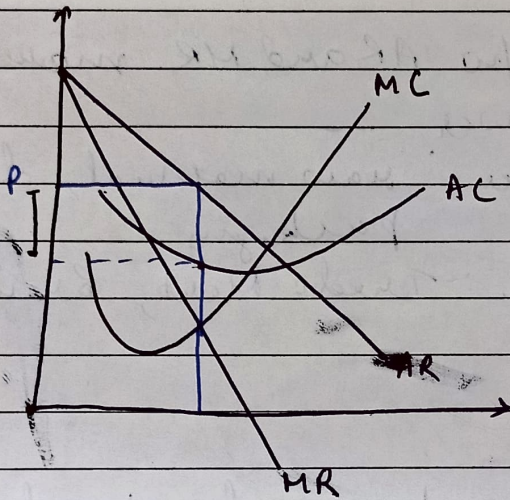
### Adjustment of Selling Outlay

Selling cost of products

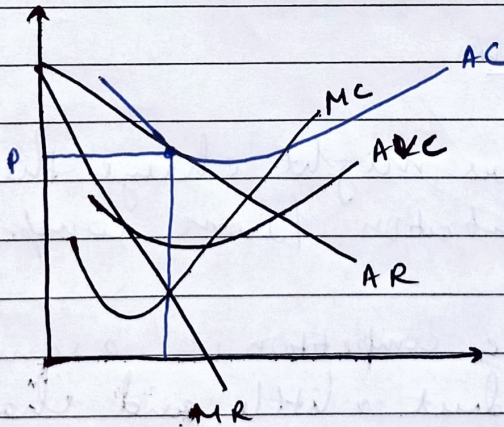
## Shoekit Rule

and graphs  
All cases " same as monopoly

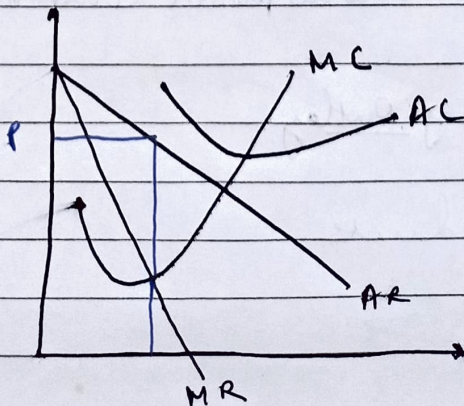
## Super Normal Profit



## Normal Profit

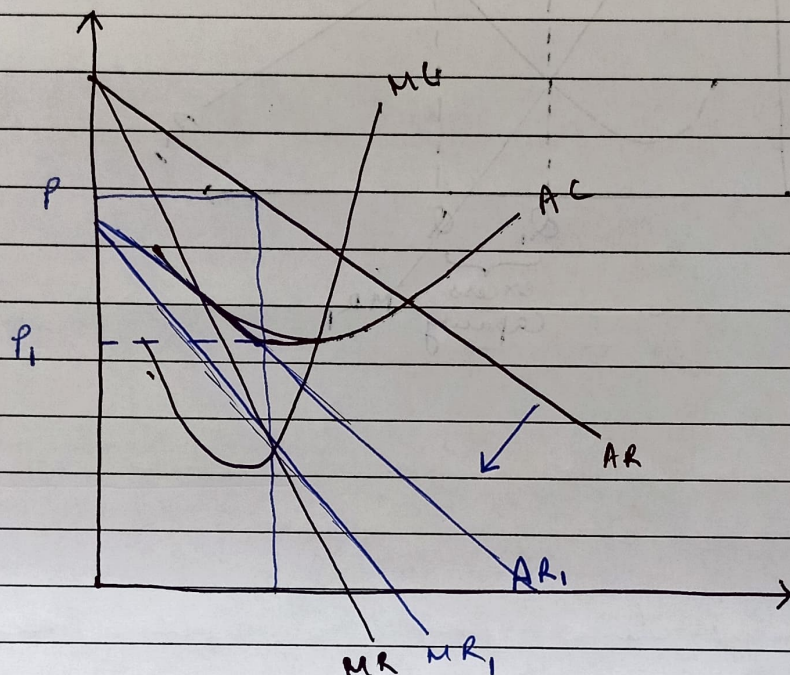


## Loss



## Long Run

In long run only normal profit takes place in monopolistic competition

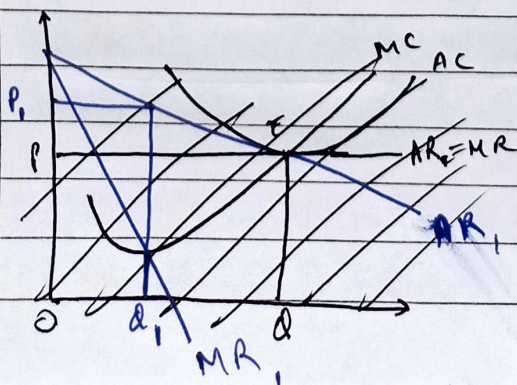


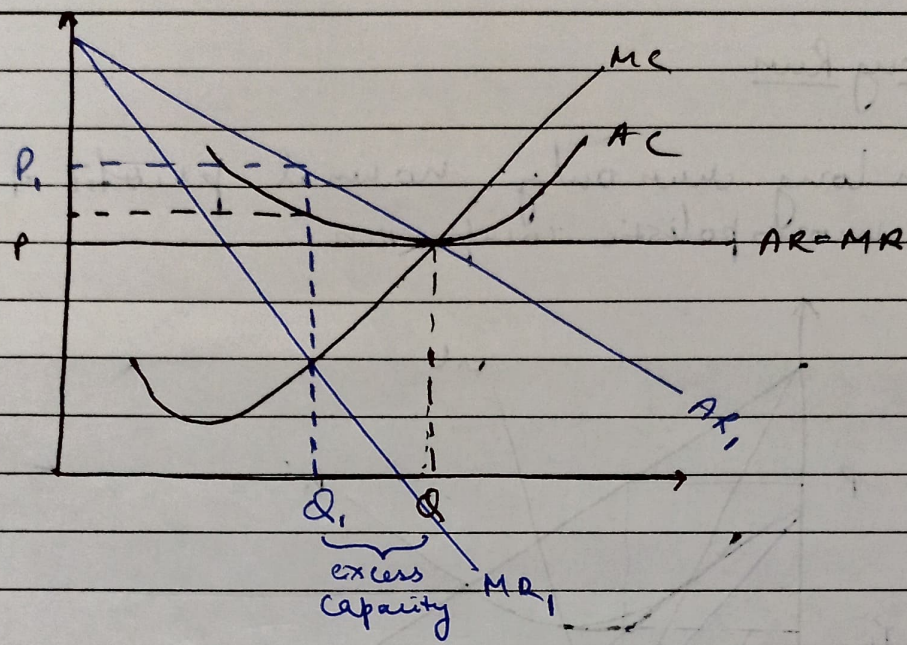
As more firms enter due to supernormal profit AR will shift till  $AC = AR$  and will get new MR and AR

## Excess Capacity

Firms do not produce optimum level of output and sell at higher price.

AC curve's minimum pt. is optimum level of output





## Oligopoly

- homogeneous product
- few sellers
- interdependence

### Kinked Demand Curve

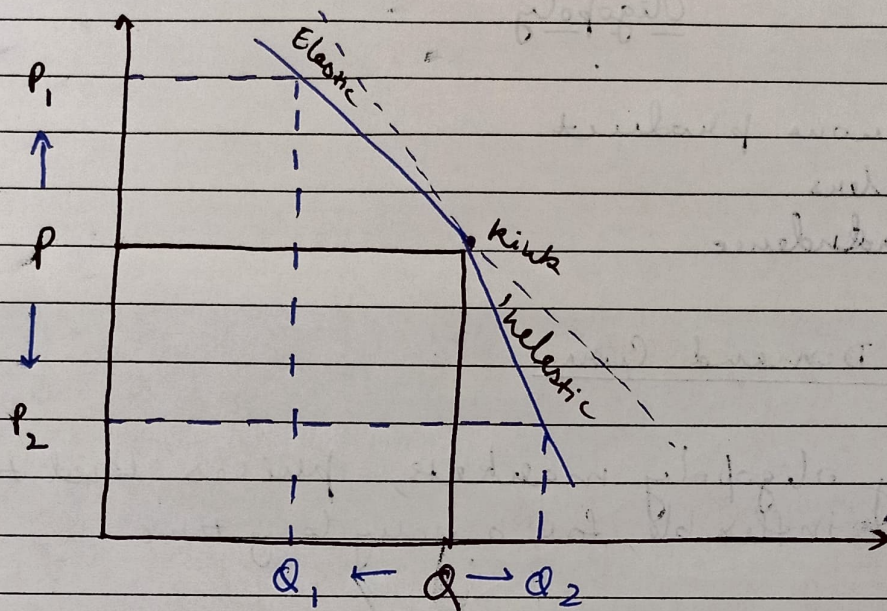
In many oligopoly markets, prices tend to remain inflexible for a very long time.

When a producer lowers the price competitors also lowers to avoid losing customers to them as they have lower price.

but when firm increase the price they face reduction in sales as consumers purchase from others.

because of this demand curve can't be fixed, there will be sharp turn/ twist in demand curve. This sharp turn in demand curve is called kinked.

When price is increased there is significant loss in sales but when price is reduced not much increase as competitors also follow.

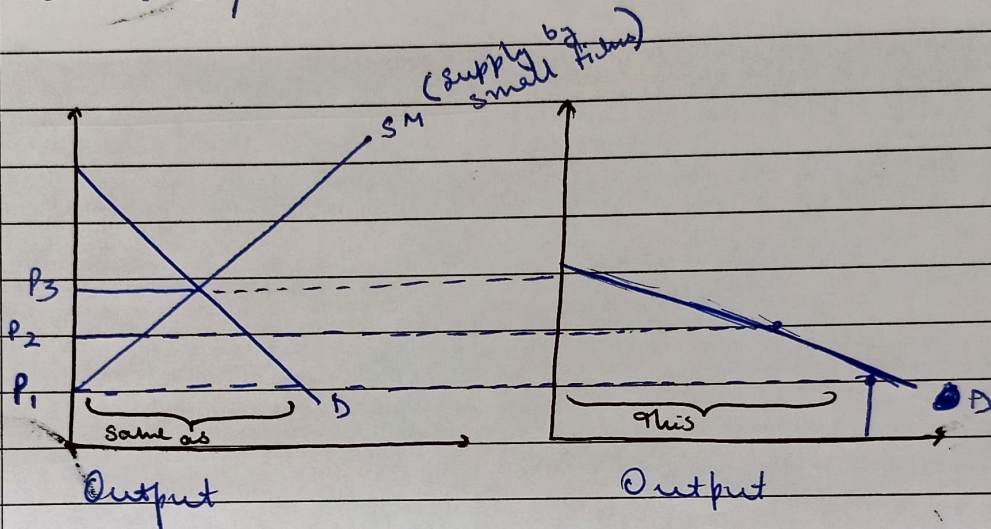


Kink arises as upper portion is elastic whereas lower is inelastic

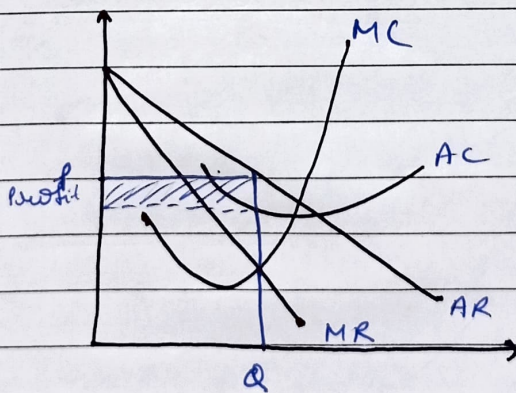
So firms do not prefer to increase/decrease price from existing price.

## Dominant Price Leadership Model

- Dominant has larger market share than other firms combined
- Decides price for other firms



At  $P_1$ , price is so low small firms can't operate.  
all supply will be done by dominant firm.



Dominant ~~at~~ will supply  
where profit is max